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Building & Highway Material Testing Laboratory

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Job No.: CTCE/BBMP/W.No.13/BJK/WMM/Gradation/2015-16

16.06.2015

GRADATION FOR WMM
MORTH TABLE-400-11

Client : **Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.

Agency : **Mr. B.J. Kumar,** Contractor, Bangalore.

Name of Work : Pot holes filling in Kalyana Nagara and Prashanth Nagara in Ward No.13, BBMP, Bangalore.

Reference : BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 11.06.2015

Date of Testing : 16.06.20155

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **8200**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	110	110	1.3	98.7	95-100
22.4	2650	2760	33.7	66.3	60-80
11.2	1650	4410	53.8	46.2	40-60
4.75	1150	5560	67.8	32.2	25-40
2.36	880	6440	78.5	21.5	15-30
0.600	800	7240	88.3	11.7	8-22
0.075	700	7940	96.8	3.2	0-8

Note:

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ಶೆಟ್ಟಿಹಳ್ಳಿ ಉಪವಿಭಾಗ, ದಾಸರಹಳ್ಳಿ ವಲಯ
ಬೃಹತ್ ಬೆಂಗಳೂರು ಮಹಾನಗರ ಪಾಲಿಕೆ
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16.06.2015

Aggregate Impact Value

IS: 2386 Part IV

Client	**Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
Agency	**Mr. B.J. Kumar,** Contractor, Bangalore.
Name of the Work	Pot holes filling in Kalyana Nagara and Prashanth Nagara in Ward No.13, BBMP, Bangalore.
Reference	BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 11.06.2015
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	16.06.2015

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	385	386	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	85	86	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	300	300	
4	Aggregate Impact value = percent fines	22.08	22.28	
	100* (W_2/W_1)%			22.18

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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Job No.: CTCE/BBMP/W.No.13/BJK/WMM/S-T/2015-16 16.06.2015

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Client	**Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
Agency	**Mr. B.J. Kumar,** Contractor, Bangalore.
Name of Work	Pot holes filling in Kalyana Nagara and Prashanth Nagara in Ward No.13, BBMP, Bangalore.
Reference	BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 11.06.2015
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	16.06.2015

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Result : Flakiness Index = **11.98%**

Elongation Index = **13.65%**

Result : Combined Flakiness & Elongation index 25.63%

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

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JobNo: CTCE/BBMP/W.No.13/BJK/BC/Bitumen/2015-16 23.06.2015

BITUMEN CONTENT DETERMINATION OF BITUMINOUS CONCRETE MIX

As per IRC:SP:11-1984

CLIENT	**Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
AGENCY	**Mr. B.J. Kumar,** Contractor, Bangalore.
NAME OF THE WORK	Pot holes filling in Kalyana Nagara and Prashanth Nagara in Ward No.13, BBMP, Bangalore.
REFERENCE	BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 11.06.2015
SAMPLE I/D	Pot holes filling to roads in Kalyana Nagara Ward No.13.
DATE OF TESTING	23.06.2015

BITUMEN CONTENT DETERMINATION

Description	Trail 1	Trail 2
1. Weight of Mixture before Test, g	500	500
2. Weight of Mixture after Test, g	474	473
3. Weight of Asphalt and Mineral matter Extracted, g	-	-
4. Weight of Mineral Matter, g.	-	-
5. Weight of Ash, g		
6. Weight of Bitumen Extracted, g. (corrected)	26	27.00
7. Bitumen content in %	5.20	5.40
8. Average	**5.30**	

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BITUMEN CONTENT AFTER GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX

As Per IS 2386 and IRC:SP:11-1984

CLIENT	**Asst. Executive Engineer,** Shettyhalli Sub Division, Dasarahalli Zone, BBMP, Bangalore.
AGENCY	**Mr. B.J. Kumar,** Contractor, Bangalore.
NAME OF THE WORK	Pot holes filling in Kalyana Nagara and Prashanth Nagara in Ward No.13, BBMP, Bangalore.
REFERENCE	BBMP/AEE/SSD/DZ/PR/2015-16 Dated: 11.06.2015
SAMPLE I/D	Pot holes filling to roads in Kalyana Nagara Ward No.13.
DATE OF TESTING	23.06.2015

GRADATION AFTER EXTRACTION

Sieve Size in mm	Trail 1				Specified Limits as per MORTH specification table 500-18 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	42.25	8.91	8.91	91.09	79-100
9.5	35.62	7.51	16.43	83.57	70-88
4.75	65.85	13.89	30.32	69.68	53-71
2.36	69.62	14.69	45.01	54.99	42-58
1.18	50.25	10.60	55.61	44.39	34-48
0.6	65.35	13.79	69.40	30.60	26-38
0.3	53.25	11.23	80.63	19.37	18-28
0.15	29.58	6.24	86.87	13.13	12-20
0.075	30.25	6.38	93.25	6.75	4-10

Sieve Size in mm	Trail 2				Specified Limits as per MORTH specification table 500-18 (Grading-2)
	Weight Retained, gm	% Retained	%Cummulative Retained	% Passing	
19	0	0	0	100	100
13.2	39.62	8.38	8.38	91.62	79-100
9.5	45.65	9.65	18.03	81.97	70-88
4.75	72.25	15.27	33.30	66.70	53-71
2.36	60.25	12.74	46.04	53.96	42-58
1.18	72.25	15.27	61.32	38.68	34-48
0.6	42.32	8.95	70.26	29.74	26-38
0.3	35.26	7.45	77.72	22.28	18-28
0.15	42.35	8.95	86.67	13.33	12-20
0.075	32.58	6.89	93.56	6.44	4-10

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